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CONCURRENT POSTTRAUMATIC STRESS DISORDER AND SUBSTANCE USE DISORDER AMONG VETERANS: EVIDENCE AND TREATMENT ISSUES

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In recent years, clinicians and researchers have become more aware of the relationships among exposure to traumatic events, posttraumatic stress disorder (PTSD), and substance abuse problems (e.g., Ruzek, Polusny, & Abueg, 1998; Stewart, 1996). These connections have been especially clear to individuals who work with combat veterans. In a large epidemiological study of Vietnam veterans (National Vietnam Veterans Readjustment Study; Kulka et al., 1990), 73% of male Vietnam veterans who met diagnostic criteria for PTSD also qualified for a lifetime diagnosis of alcohol abuse or dependence. This strong association between the two sets of problems presents real challenges to clinicians. Perhaps because the PTSD afflicting most of these veterans and their families has been of extremely long duration (around 30 years in the Vietnam veterans who comprise the largest group of such patients), it is extremely treatment resistant. Patients present with problems that are not easily addressed and that may limit veterans' ability to benefit from substance use disorder (SUD) programs. The levels of emotional distress and practical problems in living experienced by veterans with both sets of problems exceed those whose SUD is uncomplicated by PTSD, and their home environments provide little scaffolding for continued sobriety; most are unemployed, financially challenged, lacking in routine family contact, relatively socially isolated, and devoid of daily purposeful activity. Because substantial numbers of veteran patients experience difficulties related to PTSD and SUD in combination, and because they are difficult to treat, increasing consideration is being given to the potential benefits of addressing the two problems in a more integrated fashion. In this chapter I describe the literature related to this dual diagnosis in specific groups of

veterans, identify clinical practices helpful in working with these veterans, and explore key challenges to the better integration of PTSD and SUD treatment.

PTSD, TRAUMA EXPOSURE, AND SUBSTANCE ABUSE IN VETERANS

Vietnam Veterans

Most of the empirical research examining the relationships among PTSD, trauma exposure during military service, and SUD problems in veterans has been conducted with veterans of the Vietnam war. This research has focused on general community samples as well as two major groups of help seekers: (a) individuals seeking treatment for PTSD and (b) those being treated for alcohol or drug problems. Among male veterans seeking treatment for combat-related PTSD, high rates of lifetime alcohol disorders (ranging from around 40% to 85%) and lifetime drug abuse and dependence (range: 25%–56%) have been consistently documented (e.g., Roszell, McFall, & Malas, 1991; Sierles, Chen, McFarland, & Taylor, 1983). Evidence also shows that PTSD is commonly found in Vietnam veterans seeking help for SUD problems (e.g., Hyer, Leach, Boudewyns, & Davis, 1991; McFall, Mackay, & Donovan, 1992; Triffleman, Marmar, Delucchi, & Ronfeldt, 1995). For example, Triffleman et al. (1995) administered the Structured Clinical Interview for *DSM-III-R* (Spitzer, Williams, & Gibbon, 1987) PTSD module to 40 veteran SUD inpatients and found that 40% had a lifetime history of combat-related PTSD, 58% had a lifetime history of PTSD due to combat or other traumatic exposure, and 38% had current PTSD. Research on national samples of Vietnam veterans supports these clinical studies in indicating high rates of SUD–PTSD comorbidity (e.g., Centers for Disease Control and Prevention, 1988; Kulka et al., 1990).

Relative to other veteran groups, several themes are perhaps more often encountered by clinicians who work with Vietnam veterans. Some have to do with the fact that public support for the Vietnam war was so mixed. More so than in other wars and conditions of deployment, there was widespread opposition to the war among the general population. Far from having their sacrifices be acknowledged and being received as heroes, veterans routinely describe bad homecoming experiences (indifference, insults, and ridicule from civilians, e.g., being spit on or called “baby killers”). Since that time they have come to expect negative attitudes from civilians and have felt alienated from the American public. For many, these expectations have remained relatively unchanged across the years, in part because they have had little interpersonal contact with others. It is also true that

many veterans themselves experienced the war as senseless and lacked a clear conviction of its moral correctness. Many perceive their government as having lied to them and their military leaders as having mismanaged the conduct of, and therefore lost, the war. Mistrust of authority (including treatment providers) and hostility toward the government are common. These feelings were not helped by their early experiences with Veterans Affairs (VA) health care services, when the psychological impact of the war was not recognized and their right to compensation for psychological problems was questioned; indeed, many veterans remain reluctant to use available services. When compared with older veterans of World War II and Korea, Vietnam veterans more frequently describe as traumatic their experience of being exposed to brutality, mutilated bodies, the death of children, and the loss of friends (Davidson, Kudler, Saunders, & Smith, 1990). It is likely that these factors have set the scene for Vietnam veterans to experience greater personal guilt related to specific acts during the war for which they feel responsible. They have also meant that these veterans, unlike those who served in many other conflicts, sometimes cannot take refuge in a range of positive beliefs that may help to buffer their distress (e.g., "I served my country honorably"; "I'm proud of what I accomplished"; "Others appreciate my sacrifice"; "We won the war"; "It was terrible, but it was the right thing to do"). It is also apparent that the occupational lives of Vietnam veterans, perhaps more than those of veterans of World War II or Korea, have been characterized by an inability to maintain employment because of anger and anxiety, the holding of many short-term jobs, a general sense of failure, and a current decision not to seek future employment. Greater levels of alienation from civilian society, trauma-related guilt, and problems in maintaining employment have all contributed to the relatively greater social isolation seen in veterans of Vietnam.

Veterans of World War II and Korea

World War II and Korean conflict veterans are less likely than those who served in Vietnam to have sought help for PTSD in the years following their military service. Often, these older veterans appear to have indeed suffered with chronic PTSD for many years before seeking help, but they coped by working long hours (workaholism), drinking, or both. Lower past rates of help seeking may be due to factors such as less availability of mental health services, less awareness (both by veterans and health care professionals) of the chronicity of emotional problems associated with combat, a skepticism about the concept of PTSD among some older veterans, a greater perceived stigma associated with seeking help for mental illness, and a stronger generational emphasis on the minimization and nondisclosure of distressing emotions. This reticence to retell the trauma story and

acknowledge problems means that PTSD may be easily missed by health care professionals (Druley & Pashko, 1988; Macleod, 1994); possible problems with recognition of these problems are also compounded by the finding that, in elderly combat veterans, PTSD self-report scale cutoff scores that are lower than those applicable to other age groups discriminate among respondents with and without PTSD (Summers, Hyer, Boyd, & Boudewyns, 1996).

Experience with these older veterans suggests that as they age they increasingly face a number of stressors—health problems, bereavement, and retirement—that are often associated with an activation or worsening of PTSD symptoms (Macleod, 1994). This is, of course, not surprising, given that illness and the temporal proximity of death are reminders of previous war-related experiences with personal death threat and that exposure to the death of significant others is a direct reminder of war zone grief. These problems bring up feelings of vulnerability, loss of control, dependency on others, and helplessness, which are important themes for individuals struggling with PTSD. Also, when veterans retire, they lose an important avoidance strategy that may have reduced the frequency or intensity of PTSD symptoms.

The military and postmilitary experiences of veterans of the Korean conflict are in some ways similar to those experienced by Vietnam veterans and dissimilar to those of World War II veterans. The Korean conflict involved heavy casualties, territorial stalemate, and an end with no clear victor. Returning veterans received little or no public recognition, and there was some public condemnation of them for supposed poor combat performance. As a group, they were ignored and “forgotten.” Fontana and Rosenheck (1994) and McCranie and Hyer (2000) have suggested that these differences in military outcome and homecoming experience may in part account for a higher severity of PTSD symptoms and more severe psychosocial adjustment problems observed in treatment-seeking Korean versus World War II veterans.

Although clinical experience indicates that alcohol problems and PTSD often co-occur in older veterans, little research has addressed this issue. Some limited evidence suggests that Korean veterans may demonstrate alcohol problems at rates similar to Vietnam veterans and that excessive alcohol use is correlated with combat exposure (e.g., Branchey, Davis, & Lieber, 1984); Korean conflict prisoners of war also show a high (20%) prevalence of alcohol abuse (Sutker, Winstead, Galina, & Allain, 1990). Although World War II veterans in general may consume alcohol at levels lower than Vietnam veterans, high rates of alcohol consumption have been reported among American World War II prisoners of war (e.g., Engdahl, Speed, Eberly, & Schwartz, 1991; Sutker, Allain, & Winstead, 1993). Herrmann and Eryavec (1996) found a high level of lifetime alcohol abuse

(53%, and 8% had a current diagnosis of alcohol abuse) and a positive correlation between combat exposure and alcohol abuse in a sample of elderly Canadian World War II veterans residing in a veterans' long-term care facility (in whom lifetime prevalence of PTSD was 23%; Herrmann & Eryavec, 1994). Davidson et al. (1990) compared rates of alcohol problems in World War II and Vietnam veterans with PTSD and reported that 47% of the World War II patients received a lifetime diagnosis of alcoholism, compared with 68% of the Vietnam group, a nonsignificant difference. Engdahl, Dikel, Eberly, and Blank (1998) studied former prisoners of war (including both World War II and Korea veterans) and found that current PTSD was associated with significantly increased risk of lifetime (but not current) alcohol abuse and dependence. By contrast, some studies have indicated that PTSD does not predict alcohol abuse (e.g., Herrmann & Eryavec, 1996). In Herrmann and Eryavec's (1996) study, however, 64% of the veterans with PTSD also met criteria for alcohol problems.

Studies of older veterans also suggest that PTSD is generally the primary diagnosis with respect to alcohol abuse and dependence (e.g., Engdahl et al., 1998). Davidson et al. (1990) found that in their subsample of World War II veterans the onset of alcoholism followed the onset of PTSD, at a mean of 6.9 years later; and only five cases of alcohol abuse/dependence were reported by Engdahl et al. (1998) to have preceded combat exposure and the onset of PTSD. These findings suggest that veterans turned to alcohol to self-medicate their symptoms.

Veterans of More Recent Deployments

In recent years, there have been many military deployments encompassing war (e.g., Operation Desert Storm), peacekeeping (e.g., Haiti, Bosnia, Kosovo), and peace enforcement (e.g., Somalia). In general, the younger veterans affected by traumatic experiences connected with their military service have appeared somewhat reluctant to join extant treatment services dominated by older Vietnam veterans, and their rates of utilization of PTSD and SUD services in the VA are relatively low. That they are of a different generation is sometimes a perceived barrier to help seeking, and veterans of recent conflicts (e.g., the Gulf War) and peacekeeping efforts often express the view that their service was less traumatic than Vietnam, World War II, or Korea. In fact, these younger veterans almost always receive a strong welcome from their older comrades. Also, most treatment programs strongly emphasize that it is inappropriate to compare one's trauma to that of others.

Among Gulf War veterans seeking health-related care the most commonly diagnosed medical conditions include PTSD, alcohol abuse and dependence, and medically unexplained physical symptom syndromes (Engel et al., 1999). Compared with military personnel not deployed to the Persian

Gulf, those who participated in the war show higher rates of PTSD and SUD, although absolute levels of PTSD appear lower than in previous wars (Iowa Persian Gulf Study Group, 1997). Two years after the war, Wolfe, Erickson, Sharkansky, King, and King (1999) found a rate of PTSD of 8%. Despite limited American casualties, the conflict did include "pockets of trauma" in which such events as intense combat and death by friendly fire occurred. Some veterans found themselves exposed to high levels of trauma by nature of their job assignments. Sutker, Uddo, Brailey, Vasterling, and Errera (1994), for example, found high rates of PTSD (48% current, 65% lifetime) in non-help-seeking Desert Storm troops assigned grave-registration duties. In this sample, PTSD diagnoses were frequently documented in association with alcohol use disorders. Sutker, Uddo, Brailey, Allain, and Errera (1994) found a significant positive correlation between combat exposure and alcohol problems in African American troops who performed these same duties. Studies of Gulf War veterans suggest that clinicians need to attend to many of the same issues so prominent in Vietnam veterans with PTSD, including the prevention of occupational performance problems (Engel et al., 1999), the management of anniversary reactions (Morgan, Hill, Fox, Kingham, & Southwick, 1999), and the reduction of psychological stress associated with exposure to environmental toxins. They should remember, however, that increased health symptom reporting is unlikely to be exclusively psychogenic in origin; it is associated with exposure to environmental pesticides, debris from Scud missiles, chemical and biological warfare agents, and smoke from tent heaters, after controlling for war zone exposure and PTSD (Proctor et al., 1998).

Although the stresses encountered on peacekeeping missions may differ somewhat from combat stressors, studies of veterans serving in these nontraditional military roles indicate that experiences associated with peacemaking or peacekeeping can also cause PTSD, high levels of general psychological distress, or both (e.g., Fontana, Litz, & Rosenheck, 2000; Litz, Orsillo, Friedman, Ehlich, & Batres, 1997; Stuart & Halverson, 1997). For example, 8% of Somalia peacekeepers met criteria for PTSD 5 months after their return to the United States (Litz et al., 1997), and more than one third of participants met criteria for general "psychiatric caseness" (Orsillo, Roemer, Litz, Ehlich, & Friedman, 1998). This is perhaps not surprising, given that such humanitarian missions can involve, in addition to conventional military dangers, exposure to extreme climates; mass suffering and death; body handling; violent confrontations with locals; and an inability to prevent harm to starving, impoverished noncombatants. In these last few situations, personnel may be required to witness violence without being able to intervene. In a study of Somali peacekeepers, Fontana et al. (2000) found that severity of PTSD in both men and women was related not only to exposure to combat but also to exposure to the dying of the Somali people and to

sexual harassment from military personnel. Clinicians should take note of this last finding and assess previous experiences with sexual harassment in their male, as well as female, patients.

FEMALE VETERANS

Only a few studies of the relationships among trauma, PTSD, and SUD in female veterans have been performed to date. In the National Vietnam Veterans Readjustment Study (Kulka et al., 1990), female Vietnam veterans with PTSD showed a lifetime rate of 29% for alcohol disorders, higher than those without PTSD; 10% of female veterans with current PTSD had a current alcohol use disorder, compared with less than 2% of women without PTSD. Lifetime rates of alcohol abuse or dependence among Vietnam theatre veterans were greater than those observed in era veterans or civilians. In a national study of the health status of female veterans seeking ambulatory care, Hankin, Spiro, Miller, and Kazis (1999) found that those who reported being sexually assaulted while in the military were twice as likely to screen positive for symptoms of current alcohol abuse than those who did not.

Ouimette, Wolfe, and Chrestman (1996) examined the characteristics of PTSD–alcohol abuse comorbidity in a group of 52 non-help-seeking female veterans. Their sample included 12 women diagnosed with PTSD and alcohol abuse/dependence, 13 women with PTSD only, and 22 control participants with neither diagnosis; all had served during the Vietnam era. A useful aspect of the study was the separation of gender-based stressors (e.g., sexual harassment) from “traditional” military stressors. Results indicated that women diagnosed with PTSD and alcohol abuse/dependence were more likely to report a history of childhood sexual abuse, and they reported a greater number of childhood traumas, more sexual assaults as adults, and more gender-based wartime stress than both comparison groups. They did not differ in terms of other trauma variables, including exposure to traditional war zone stressors. In relation to symptoms, dual-diagnosis women reported more PTSD, dissociation, and borderline personality disorder symptoms than the comparison groups.

Taken together, these findings are similar to those obtained with male veterans, in that trauma exposure and PTSD are both associated with alcohol abuse/dependence (see also Davis & Wood, 1999) and survivors with both PTSD and alcohol problems experience more symptoms than those with PTSD only. However, childhood sexual abuse, sexual assault, and gender-based stressors, rather than levels of exposure to traditional war stressors, appear most related to concurrent PTSD and alcohol problems. Clinically speaking, this means that treatment is often focused on their experience of

sexual assault rather than combat trauma. The presence of men can often act as a powerful trauma reminder, which means that if male helping professionals are part of the treatment team, they must be well trained and sensitive to the experience of sexual assault survivors.

ASSESSMENT AND INTERVENTION

Treatment Outcome Research

It is possible that SUD-PTSD veterans will have worse outcomes following treatment than those with either disorder alone. Ouimette and her colleagues (Ouimette, Ahrens, Moos, & Finney, 1997, 1998; Ouimette, Moos, & Finney, 2000) have published a series of reports following the course of treatment for male veterans being seen in VA SUD programs. Their work suggests that patients with concurrent PTSD and SUD appear to benefit less from treatment than both those with SUD only and those with comorbid Axis I disorders. Ouimette, Ahrens, et al. (1998) compared male veterans with concurrent SUD and PTSD (SUD-PTSD), those with SUD problems only (SUD), and substance-abusing patients with another (non-PTSD) Axis I disorder (SUD-PSY) in terms of changes during treatment. Compared with SUD patients, those with concurrent PTSD improved less during treatment in several domains of change: psychological distress, coping skills, and adaptive cognitions. Relative to the SUD-PSY group, SUD-PTSD patients reported more distress and expected fewer benefits from stopping substance use. One year after termination of treatment, SUD-PTSD patients were significantly worse than both comparison groups on measures of problems due to substance use, psychological distress, and support from friends (Ouimette et al., 1997). Compared with SUD patients, they were less likely to be employed and had higher rates of readmission for SUD or psychiatric treatment. Overall, these findings suggest that a diagnosis of PTSD limits the effectiveness of conventional SUD treatment. However, PTSD status in these studies was established by chart diagnoses, the reliability and validity of which are unknown and probably resulted in an underestimation of rates of PTSD. It is possible that patients in these studies who were diagnosed with PTSD presented with more severe symptoms or otherwise differed from patients whose PTSD went unrecognized. Research using standardized diagnostic interviews is required before these findings can be extended to include the general population of veterans with chronic PTSD who are seen in SUD treatment settings.

Many researchers and clinicians have argued that treatment for veterans who suffer with both PTSD and SUD problems, like their civilian counterparts, will be more effective if both sets of problems are addressed

explicitly in treatment. However, there is little empirical evidence to support such arguments at present. Some unpublished studies do suggest that integrated SUD–PTSD treatment may be effective (e.g., Abueg, Fairbank, Penk, & Gusman, 1995; Donovan, Padin-Rivera, & Kowaliw, 2001). For example, Donovan et al. (2001; Donovan & Padin-Rivera, 1999) evaluated a comprehensive 12-week partial hospitalization treatment for 46 veterans with PTSD and polysubstance (70%) or alcohol dependence (30%) diagnoses. Their comprehensive approach involves 10 hours of group therapy per week and includes a wide range of program elements. It emphasizes peer support, includes attention to both childhood and war zone issues, and incorporates a variety of therapeutic methods (e.g., sand tray exercises, skills training, behavioral homework, drug-free housing). Veterans were treated in cohorts of up to 8 clients and were assessed at pre- and posttreatment and at 6- and 12-month follow-ups. The researchers reported significant reductions in Clinician-Administered PTSD Scale scores (Blake et al., 1990) from pre- to posttreatment, and most gains in PTSD symptoms were maintained at both follow-up periods. Significant reductions in substance use (days of alcohol use, alcohol use to intoxication, and polysubstance use) were achieved during treatment and maintained at follow-ups. Although the study's strengths include use of a manual-based protocol, assessment by an independent evaluator, and a 12-month follow-up period, in the absence of a control group the observed gains cannot be attributed to the treatment. Also, veterans included in the study were required to have participated in conventional SUD treatment before entering the dual-diagnosis program, and posttreatment substance use variables were compared with substance use before completion of the traditional program, so any improvements cannot be attributed to the latter program. Overall, the study suggests that PTSD and SUD problems can be significantly improved by treatment, but the study design limits any strong conclusions as to the actual benefits of an *integrated* SUD–PTSD treatment.

Other research has suggested that treatment for PTSD can enhance SUD treatment outcomes. Ouimette, Moos, and Finney (2000) found that amount of outpatient PTSD service use after completion of inpatient SUD treatment was a major predictor of SUD outcomes. Relative to other types of visits (psychiatric, SUD), number of PTSD visits in the second year and total number of PTSD visits over the 2 years after hospitalization had the largest effects on remission from SUDs. Consistency of PTSD care (two or more sessions per month for varying lengths of time) also predicted remission: A significantly higher proportion of SUD–PTSD patients who received consistent care for 3 months or longer were in remission from SUD and substance dependence. However, as the authors acknowledged, one cannot conclude from this study that PTSD treatment causes increased rates of remission from SUD. Patients may have self-selected into participation in

PTSD outpatient care on the basis of various other characteristics that may have affected outcome. Nonetheless, the findings cited here provide some suggestive preliminary evidence that addressing traumatic stress and PTSD in SUD treatment will improve outcomes for veterans. Further development of approaches that integrate treatment of the two disorders is needed, and randomized controlled trials are necessary to demonstrate that such treatments improve on conventional services.

Clinical Care

As indicated above, the treatment of veterans with PTSD and SUD is more art than science; practice guidelines based on empirical studies are not yet available. Nonetheless, it is possible to outline some practical implications of existing research and note potentially important treatment considerations.

First, clinicians who work with veterans should routinely assess substance use patterns and routinely screen for trauma exposure and PTSD. This may be especially important in work with female veterans. Grossman, Willer, Stovall, Maxwell, and Nelson (1997) examined discharge diagnoses of male and female veterans hospitalized at an urban VA medical center and found evidence of the underdiagnosis of both PTSD and SUDs in their sample of women. With regard to screening for trauma history, it is important to recognize that screening should extend to all types of trauma. Exposure to non-combat-related trauma is common among veterans (Hankin et al., 1999). Investigations of male substance-abusing veterans particularly indicate high rates of childhood physical and sexual abuse (e.g., Krinsley, Brief, Weathers, & Steinberg, 1994; Schaefer, Sobieraj, & Hollyfield, 1988; Triffleman et al., 1995). Triffleman et al. (1995) administered the Trauma Antecedents Questionnaire (Herman, Perry, & Van der Kolk, 1989) to 44 veteran SUD inpatients and found that 77% reported being exposed to at least one type of severe childhood trauma, and 48% had experienced two or more childhood traumas. These rates of exposure mean that veterans seeking SUD treatment often have PTSD as a result of traumatic experiences, especially childhood trauma, that are not related to combat. In fact, Triffleman et al. (1995) found that of veterans receiving inpatient SUD treatment and diagnosed with lifetime PTSD, 28% were cases of non-combat-related PTSD. A variety of instruments have been developed to systematically assess past history of exposure to both military (Keane, Newman, & Orsillo, 1997) and civilian (Norris & Riad, 1997) traumatic events, and PTSD screening tools have been developed for use in medical settings (e.g., Andrykowski, Cordova, Studts, & Miller, 1998) and epidemiological research (e.g., Breslau, Peterson, Kessler, & Schultz, 1999).

If a veteran is being treated for PTSD and an SUD problem is detected, it is very possible that motivation to change alcohol or drug use will be low. The patient may see his or her SUD problem as less important than PTSD, or alcohol and drugs may be perceived as a helpful ways of coping with trauma-related distress. Clinicians should therefore assess patients' motivation to abstain and set specific treatment goals with regard to all substances; often veterans may see the need to change their use of one substance but plan on continuing use of another. Attention to motivation may be especially important during the initial period of abstinence, when substance-abusing patients with comorbid PTSD will require strong support. There is significant overlap between symptoms of PTSD and opiate withdrawal (Salloway, Southwick, & Sadowsky, 1990), which may in part explain why anecdotal reports indicate that withdrawal symptoms may be associated with an increase in traumatic memories; exacerbation of PTSD symptoms; and, possibly, increased suicide risk (e.g., Daniels & Scurfield, 1992; Kosten & Krystal, 1988). Clinicians should prepare their patients for possible short-term worsening of PTSD symptoms and teach them strategies for managing symptoms and urges to drink or use other drugs. In general, clinicians should be alert to risk of dropout from care. Boudewyns, Woods, Hyer, and Albrecht (1991) reported that violation of a treatment policy prohibiting substance use was the primary reason among veterans with combat-related PTSD for not completing inpatient PTSD treatment.

If PTSD is identified in a veteran who is being treated for SUD, a number of considerations are in order. Research suggests that male substance-abusing veterans with PTSD (e.g., Hyer et al., 1991; Schaefer et al., 1988; Sharkansky, Brief, Peirce, Meehan, & Mannix, 1999) or with histories of childhood trauma (e.g., Krinsley et al., 1994) experience higher levels of subjective distress and other problems than SUD patients without PTSD or childhood trauma. Such problems may include more years of substance use, more symptoms of substance dependence, and more treatment episodes. They may also include a greater number of problems in living, including legal problems, social conflicts, violent behavior, assault charges, and suicide attempts. Female substance-abusing veterans with PTSD have been found to report more severe PTSD symptoms than women with PTSD only (Oui-mette et al., 1996). These increased rates of problems mean that these veterans will often require more frequent practitioner contact and longer treatment.

Much of the treatment of SUD, of course, involves training in skills for managing problem situations without drinking or using other drugs. With SUD-PTSD veterans it is important to supplement general relapse prevention methods with attention to potential trauma-related relapse situations (Abueg & Fairbank, 1991). A key role of the clinician is to help the

patient identify individual high-risk situations and prepare him or her to cope with them. Part of the task is to motivate the veteran to change. A general commitment to PTSD or alcohol treatment may not extend to a similar desire to reduce violence, confront avoided situations, develop more intimacy with others, or reduce hypervigilance behaviors. The nonconfrontational motivation-building approaches developed by Miller and Rollnick (1992) may be especially helpful in this regard. Murphy, Cameron, Sharp, and Ramirez (1999) recently described a manual-based group intervention that applies these approaches to veterans with PTSD to encourage them to contemplate and commit to changing a range of trauma-related problems.

Although all veterans will need to cope with many, many situations that provoke PTSD symptoms, or urges to use substances, or both, and there is great variation in the individual profile of such situations, especially important for many will be skills for coping with commonly occurring (but difficult to manage) relapse triggers: PTSD symptoms themselves, interpersonal anger and conflict, trauma-related guilt, and social isolation.

Veterans report frequent use of alcohol and drugs in response to PTSD symptoms and lack confidence in their ability to manage symptoms without resorting to substance use. The literature specifically suggests that veterans with PTSD may use alcohol to reduce symptoms of arousal. In addition to anxiety management skills (i.e., muscular or imaginal relaxation, breathing retraining, self-talk), tools for staying "grounded" and avoiding being overwhelmed by emotion are important. The Seeking Safety treatment protocol developed by Najavits (Najavits, Weiss, Shaw, & Muenz, 1998; see also chapter 8, this volume) includes a variety of useful grounding tactics, including repeating "safety statements" (e.g., "My name is _____ and I am safe right now," "I am in the present, not the past"), touching objects in the immediate environment and noticing how they feel, and looking at the photographs of loved ones.

Research has documented significant anger control problems (e.g., Chemtob, Hamada, Roitblat, & Muraoka, 1994) and violence (McFall, Fontana, Raskind, & Rosenheck, 1999) in veterans with PTSD. Aggression and hostility in substance-abusing veterans are associated with use of more negative coping strategies (escape-avoidance, distancing, and confrontational coping) and less confidence in personal ability to resist substances when confronted with high-risk situations, especially unpleasant internal states, rejection, and conflict with family and friends (McCormick & Smith, 1995). PTSD-related anger is usually experienced by the veteran as rapid in onset (all or nothing), intense, and difficult to control. Anger treatments designed specifically for veterans with PTSD have been described (Novaco & Chemtob, 1998; Reilly, Clark, Shopshire, Lewis, & Sorensen, 1994), and preliminary evidence supports their utility (Chemtob, Novaco, Hamada, & Gross, 1997).

Some of the distress associated with war-related memories is generated by feelings of guilt. In fact, nearly two thirds of Vietnam veterans may experience moderate or greater guilt related to war experiences (Kubany et al., 1996). Veterans often experience these guilt feelings as relatively intractable, grounded in fact rather than being a product of interpretation or judgment. Simple discussion usually fails to modify these beliefs, and clinicians, like patients, can feel unsure of how to address them. Kubany's (1998) systematic cognitive therapy approach provides people who work with veterans with a helpful analysis of the nature of thinking errors and faulty conclusions that drive trauma-related guilt, procedures for guilt assessment, and practical advice for restructuring guilt cognitions.

Skills for escaping social isolation are also important in recovery. Many veterans with chronic PTSD and SUD problems have only occasional and brief contacts with others. Social isolation contributes to loneliness and a sense of purposelessness in their lives, and it creates a fertile ground for negative thinking. Isolated veterans lack companionship, friendship, emotional intimacy, and emotional and practical support for sobriety, factors that could in principle aid in their recovery. Probably the major factor motivating veterans to endure the stresses of psychological treatment is a desire to improve their relationships with partners and family members. Also, when veterans enter residential PTSD or SUD treatment settings, they usually greatly value the connection with other veterans; it often appears that the mutual support, understanding, and friendship evident among the patients deserves much credit for whatever therapeutic improvement is observed. For these reasons, it is crucial that counselors work with veterans to reduce social anxiety, improve communication and friendship skills, and increase participation in social activities. For this to happen, however, it is not enough to simply offer brief training in generic communication skills. Rather, social connection should be made a specific and sustained target of treatment, accompanied by regular therapeutic assignments to participate in family activities, join in social contact with other veterans, participate in appropriate volunteer and veterans' organizations, or some combination of these. As veterans experiment with these situations they will need ongoing support, help in solving problems, and instruction in managing conflicts.

In part because many veterans with SUD-PTSD are socially isolated and lack a social group that will support their abstinence, 12-step programs can play a potentially very important role in their recovery. In this context, attendance at Alcoholics Anonymous or Narcotics Anonymous meetings provides an opportunity to make a positive change in the social environment of veterans. Moreover, it provides a "laboratory" in which to address many of their interpersonal problems: social anxiety, social skills deficits, difficulties with intimacy and trust, feeling unsafe in groups of people, and so on.

Although it has often been assumed that veterans with PTSD will have special difficulties in affiliating with the groups (Satel, Becker, & Dan, 1993), some recent research suggests that they have similar rates of posttreatment participation as veterans with substance abuse problems only (Ouimette et al., 2001). However, rates of participation are modest for both groups, and clinicians should, when appropriate, target affiliation as a treatment goal. It is important to assess for and, where necessary, address, negative attitudes toward participation in support groups as well as significant levels of social anxiety and deficits in social skills that may interfere with participation. With regard to women, consideration should be given to the fact that exposure to 12-step groups composed largely of men may present a real problem for those with a history of male-perpetrated sexual assault; use of women's meetings may be preferable, especially early in recovery. Consistent with clinical experience suggesting the utility of self-help group participation, Ouimette, Ahrens, et al. (1998) found that greater 12-step involvement was associated with a number of positive changes during treatment for participants with both PTSD and SUD: greater use of positive appraisal and problem-solving coping, less use of emotional discharge coping, and fewer psychological symptoms at discharge. Greater posthospital 12-step group participation has also been found to be associated with remission from SUDs over a 2-year period following inpatient hospitalization for SUD (Ouimette, Moos, & Finney, 2000).

Summary

Data that indicate whether addressing traumatic stress and PTSD in the context of SUD treatment will improve outcomes for veterans are extremely limited at present. It is clear that veterans with an SUD-PTSD dual diagnosis experience higher levels of distress and more problems in living than veterans with SUD only, and there is some suggestion that substance-abusing veterans with concurrent PTSD will have worse outcomes after treatment. Clinicians should routinely screen for SUD, trauma history, and PTSD in their veteran patients; set specific treatment goals for all substances; provide strong support during the initial period of abstinence; provide training in management of PTSD symptoms, interpersonal anger and conflict, trauma-related guilt, and social isolation; and take concrete steps to increase affiliation and engagement with self-help support groups.

CHALLENGES IN SERVICE DEVELOPMENT

An extensive network of treatment services is available for veterans experiencing PTSD, SUD, or both within the national Veterans Health

Administration, the VA's health care system. At the current time, 173 medical centers are supplemented by more than 391 outpatient, community, and outreach clinics, including the VA's 205 Readjustment Counseling Service Vietnam Veteran Outreach Centers ("Vet Centers"). These helping services address PTSD and SUD by means of general mental health counseling; specialist SUD detoxification, residential, and outpatient services; specialist PTSD residential and outpatient services; and a smaller number of dual-disorder SUD-PTSD services that attempt to integrate treatment for the disorders. Veterans commonly receive help for their problems in sequential fashion, first participating in SUD treatment and then being referred for treatment focusing on PTSD. PTSD services routinely address SUD recovery as part of their care.

In the past, the VA has not provided an environment that is sensitive to the needs of female veterans with dual PTSD and SUD. Women have sometimes been treated in inpatient units surrounded by male patients, which is a major problem given that sexual assault is so commonly part of their history. To receive help, women have had to enter a hospital environment peopled largely by men, to see primarily male treatment providers. With the development around the country of a number of women's outpatient trauma treatment services, the establishment of women's residential programs specializing in treatment of PTSD, and the designation of women's coordinators at all VA medical facilities, this situation is changing for the better. At the current time, the VA treatment system is a rich resource for veterans with PTSD and SUD, providing easy and widespread access to services targeting both disorders. Clinicians treating veterans in non-VA treatment settings are therefore in a position to supplement their care with referrals to relatively intensive specialized services to address the needs of their patients with PTSD, SUD, or both.

Although the VA has been a leader in explorations of integration of PTSD and SUD treatment (e.g., with the establishment of dual-diagnosis substance use and PTSD treatment programs), it is interesting to note that awareness of the link between the two disorders has failed to effectively penetrate traditional SUD treatment services in the VA. Ouimette, Ahrens, et al. (1998), in their study of outcomes for SUD-PTSD patients in VA inpatient SUD programs, noted that none of the 15 programs studied included PTSD-focused treatment components. If a better integration of treatment for these disorders is to be achieved, it will be necessary to identify and explore ways of challenging the barriers to such integration.

A first barrier is the need to persuade individuals in decision-making positions that an integrated approach to treatment will help veterans. A proximal step in accomplishing such persuasion will be the implementation of improved PTSD and trauma screening by SUD treatment staff. Systematic screening will increase rates of identification of veterans with trauma

histories and PTSD and increase awareness on the part of clinicians and administrators. Better dissemination of the kind of information presented in this chapter will be helpful in the persuasion effort, but it is incumbent on the individuals advocating change to empirically demonstrate improved outcomes for veterans when trauma and PTSD are addressed during SUD treatment. Particularly useful will be comparisons of sequential versus integrated treatment of the two disorders.

Barriers also exist at the level of the individual provider. The vast majority of those who provide traditional SUD counseling services to veterans have received little education or training about trauma and PTSD. Most believe that substance use problems should be the central focus of their attention and that other issues (e.g., trauma history) are better tackled at a later time. It is likely that some staff will not see it as part of their role to address PTSD, and some staff (and patients) will be generally fearful of discussing traumatic experiences. Some specialized SUD-PTSD interventions (e.g., therapeutic exposure) are likely to be difficult to implement in the absence of experienced trauma therapists and therefore unlikely to be delivered widely. Training will be required if SUD programs are to increase rates of assessment of PTSD and delivery of PTSD-informed treatment. At the present time, materials to assist providers in bringing trauma-related issues into SUD treatment for veterans are not widely available.

At the organizational level, the separation of SUD and PTSD treatment services means that providers treating the two disorders may be physically separated and limited in their knowledge of each other's relevant expertise and services. Moreover, the reality of separate services sometimes sets up turf battles in which different programs compete for access to patients. Perhaps the greatest barrier is simply the fact that existing programs have their own traditional way of doing things. It is important, therefore, that those interested in bringing PTSD issues into SUD treatment be sensitive to the traditions and strengths of that treatment and design their approaches in ways that are compatible with existing substance care and that attempt to complement rather than supplant that care.

As a final comment on service development, it is important to note that awareness of the SUD-PTSD relationship should reach beyond specialized mental health and SUD treatment services into other settings where these patients may present themselves. In particular, primary care physicians and nurses should be trained to better identify and respond to the needs of SUD-PTSD patients. Davis and Wood (1999) suggested that female veterans with SUD and sexual trauma histories show physical health problems and are likely to seek help in primary care clinics. Hankin et al. (1999) studied a representative sample of 2,160 male veterans being seen in Boston ambulatory care facilities and reported that patients who experienced a traumatic event in the past year or during their lifetime were twice as

likely to meet criteria for an alcohol-related disorder as those with no such experience. Of patients who screened positive for PTSD, 24% also screened positive for an alcohol-related disorder. Of those who met screening criteria for alcohol problems, 39% screened positive for PTSD.

Although many clinicians and researchers have spoken to the need to better integrate treatment for the two sets of problems, practical models of such integration require further systematic development. The ability to design more effective treatments for veterans will depend on better understanding of the impact of alcohol and other drugs on PTSD symptoms and of the effects of PTSD on SUD recovery. That treatment informed by this understanding will achieve greater reductions in PTSD symptoms, other trauma-related problems, and use of substances remains to be demonstrated through careful evaluative research.